



Making Progress for Salmon and Steelhead

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Columbia River Basin Salmon Runs Are Improving

Federal, state, tribal and local actions are helping to protect salmon and steelhead in the rivers and streams of the Columbia River Basin. Nature has given the fish a boost with several years of good ocean conditions and adequate rains and snowmelt. Together, these actions and conditions have brought about record numbers of fish.

With cooperation from the ocean, we would expect upward trends for the fish to continue. But history tells us ocean conditions are cyclical; we must be ready for the next low point in the cycle. The region needs to keep up its aggressive efforts to sustain the fish through tough times, so when good ocean conditions come around again the fish will be ready. Our aim is to move the overall trends up, so the fish are not only out of danger but can continue to be an important part of the Northwest culture and economy.

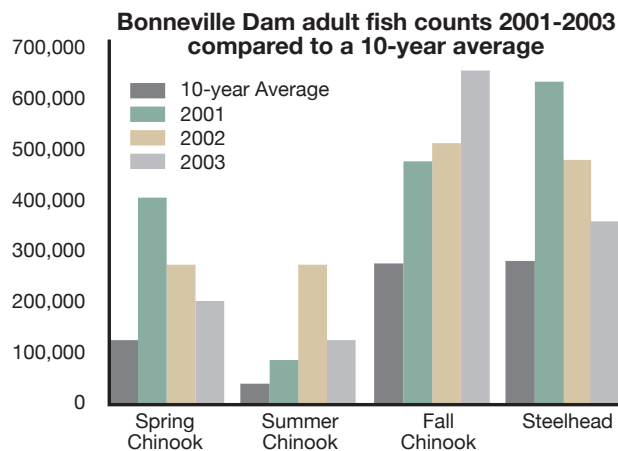
Habitat restoration and enhancement actions provide the fish more clean, cold water and sufficient gravel beds for spawning. Irrigation diversions, road culverts and small dams are being modified or removed to open habitat areas so fish can thrive.



In FY 2003, 19 streams and 12 rivers, totalling 436 miles, benefitted from the funding of 33 water transactions.

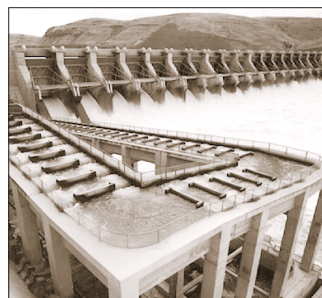
We are making fish passageway improvements at the mainstem dams so young fish can get past the huge dams safely, and adult fish can continue to successfully find and use the fish ladders on their return from the ocean.

We are improving hatchery management to boost populations and protect wild fish. Federal agencies



Dramatic returns in 2000 allowed the first spring Chinook fishery to open since 1973. Each year since then, fishers have enjoyed a harvest.

and funding support over 50 hatchery populations in the Columbia Basin, providing the backbone for commercial, sport, and tribal fisheries. Hatchery and Genetic Management Plans will soon be completed for every federal hatchery in the basin



Improvements to aid fish survival past the dams are a central feature of the Federal commitment to salmon.

to identify reform actions that will help listed stocks. We are implementing “safety net” programs for Snake River sockeye and other salmon populations currently at very low levels. Some good news is that, after study of extinction risk for Snake River

salmon and steelhead, we’ve learned there are no populations at serious additional risk of extinction or requiring new safety net programs.



The *Citizen Update* is a publication of a group of Northwest federal agencies that work together to protect Columbia River Basin salmon.



There's More to be Done

We need to better address predation on young salmon, which can be a severe setback for salmon restoration efforts. Federal agencies are exploring ways to manage Caspian tern colonies by dispersing the colonies to areas where young salmon would not be such a big part of their diet. We are looking at ecologically sound options for managing other birds such as cormorants that prey heavily on young salmon, as well.

We are also intensifying the program for harvest of northern pikeminnow, a non-native species of fish that feeds on young salmon in the rivers. In 2004 alone, over 265,000 pikeminnow were removed. This program recently received high marks in a study by the Pacific States Marine Fisheries Commission. These actions will benefit all of the fish migrating through the hydrosystem, not just those listed under ESA.



Tern predation on juvenile salmon is down roughly 40 percent after 9,000 pairs of Caspian terns nesting in the Columbia River estuary were relocated. Terns were unharmed.

New technologies can provide better ways to help fish pass the dams. For example, engineers and biologists are working on a way to improve juvenile fish survival when they pass dams on their way to the ocean.

At Lower Granite Dam, a spillway weir provides a more natural and efficient passage route for juvenile fish. This "fish slide"



From 2000 to 2003, over 27 percent of returning Yakima River spring Chinook were the result of hatchery production at the Yakama Tribal Cle Elum Supplementation and Research Facility.

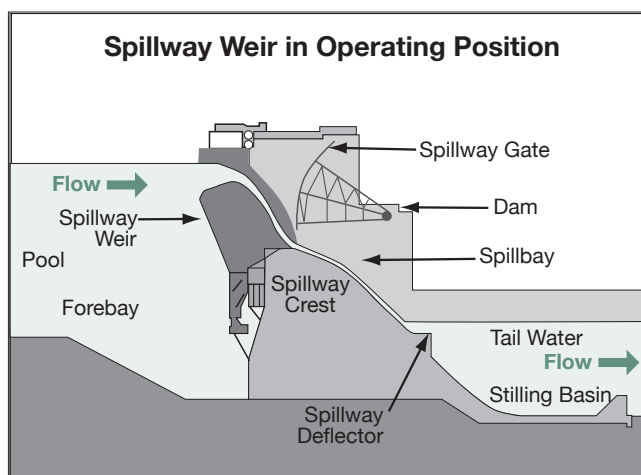
weir allows juvenile salmon to travel near the water surface of the forebay (area above the dam) to the tailrace (area below the dam) via spillways. Tests indicate the fish slide is four to five times more efficient at attracting juvenile salmon and steelhead than traditional spill, effectively passing more fish with less water.

Additionally, fish don't hesitate or delay as long before passing the structure, making them less vulnerable to predators and allowing them to stay closer to their natural migration timeline. Survival over the weir is as good as or better than with traditional spill, in which the fish pass under a spillway gate. Economically, fish slides are appealing because they require less spill; water not spilled can be used for power generation. Another fish slide will be installed and tested at Ice Harbor Dam in 2005, and similar

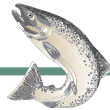
ones are envisioned for other dams over the next ten years.

The Columbia River estuary is getting deserved attention as regional partners work together to open up areas that have been diked, and to restore wetlands and shallow-water areas. These estuary habitats are important to many species of young salmon for resting and feeding as they prepare for a three- or four-year adult life in the ocean.

These collaborative, wide-ranging actions will benefit salmon throughout their life cycle and enable them to make the most of good ocean conditions and restored habitat. We will continue to leverage improvements in science and technology, using our improved understanding of the fish and what affects them as they make their remarkable journey from stream to ocean and back again.



Preliminary tests show that "fish slides" can be 4 or 5 times more effective in fish passage per unit of flow than existing gates.



What is a Biological Opinion All About?

The Endangered Species Act (ESA) is very specific about possible harm to threatened species, including the salmon and steelhead the law protects in the Pacific Northwest. It requires any federal agency proposing to do anything that might affect an ESA listed species—such as issuing a permit to someone else, spending money on a project, taking a direct action—to ensure that the action will not unduly harm protected species. The agency must also seek the expert opinion of the U.S. Fish and Wildlife Service (USFWS) or NOAA Fisheries about the effects of the action. USFWS or NOAA Fisheries will issue a Biological Opinion (BiOp) to the “action agency” evaluating the proposed action.

The primary goal of a BiOp is to ensure that the action is not likely to jeopardize the species’ continued existence or unduly modify its designated critical habitat. The bottom line: a BiOp prevents unacceptable harm to a listed species. USFWS and NOAA Fisheries have hundreds of BiOps in place in the Columbia Basin, for large and small actions, covering a small locale or a substantial region.

Revised BiOp for the FCRPS Enhances Federal Commitments

For salmon and steelhead in the Columbia River Basin, the BiOp issued by NOAA Fisheries in 2000 on the Federal Columbia River Power System (FCRPS) has been the center of attention. It focused on the proposed action by the federal “Action Agencies”—Corps of Engineers, Bureau of Reclamation and Bonneville Power Administration—to operate the system. In the 2000 BiOp, NOAA Fisheries recommended additional actions to avoid jeopardy to listed fish, in a “reasonable and prudent alternative” (RPA).

In 2003, Judge James Redden of the Oregon Federal District Court ordered NOAA Fisheries to revise its 2000 FCRPS BiOp because actions of non-federal entities it relied upon were not certain to occur and provide desired biological benefits.

In revising the BiOp, NOAA Fisheries reviewed an “Updated Proposed Action” (UPA) from the Action Agencies and determined it would not jeopardize listed species. The UPA replaces the RPA the Action Agencies agreed to implement following issuance of the 2000 Biological Opinion. The UPA continues the momentum of the actions the agencies have planned and completed to date. In practice, the level of protection for these fish is undiminished.

The UPA also reflects legal consequences of the Judge’s ruling regarding specificity. For example, the proposed habitat actions provide greater certainty and sharper focus by targeting specific biological needs, or limiting factors, for each of the listed stocks. The Action

Agencies provide specific commitments to protect and enhance riparian areas as well as improve passage, including three and six year targets to measure accomplishments. The UPA will also measure the Action Agencies’ performance in meeting specific goals to achieve improved fish survival and passage through each of the dams, and implementation plans will ensure that the most successful and efficient measures are utilized to achieve these goals.

Like other biological opinions that are issued across the nation for federal projects, this BiOp evaluation focuses specifically on the Action Agencies’ proposed action—operation of the dams—and the impact on listed species: salmon and steelhead. Because the dams were built before the fish were listed under ESA, NOAA Fisheries is evaluating the dams as part of the pre-existing conditions, or environmental baseline. In so doing, NOAA took baseline condition of the hydro system and current status of listed species into account. They determined that any adverse impact to salmon by the dams over the next few years will not jeopardize listed species because specific and substantial planned improvements by the federal agencies will ensure increased fish passage and survival for the long term. These improvements are in addition to the substantial effort that will continue to be funded through federal agencies to account for the dams and their impacts, such as the Lower Snake River Fish & Wildlife Compensation Plan and the Northwest Power and Conservation Council’s Fish and Wildlife Program.



How Do Biological Opinions Fit in with Recovery?

Biological Opinions are one part of the ESA process. Another is the development of recovery plans. ESA requires recovery plans for every listed species. A recovery plan has to describe specific management actions, establish objective, measurable criteria for when a species no longer requires protection and can be removed from the ESA list, and estimate the time and cost to carry out these measures. The plan helps to identify what various entities should be doing to promote self-sustaining populations of the species.

The protections established in a BiOp are an important foundation for long-term recovery of a listed species, but recovery will clearly require additional improvements that go beyond the actions that merely avoid jeopardy. The Action Agencies are in fact proposing several “conservation measures” in the BiOp beyond the required action, that will contribute to recovery. For example, BPA proposes to improve riparian habitat and improve instream flows for Upper Columbia steelhead in the Okanogan subbasin, and Reclamation proposes to improve spawning and rearing habitat in several areas through technical assistance to local partners.

NOAA Fisheries plans to develop draft recovery plans on salmon and steelhead for regional review in 2005, working closely with locally supported subbasin planning efforts through the Northwest Power and Conservation Council. Recovery of listed salmon and steelhead stocks remains a fundamental commitment of the federal agencies.

Working Together Toward Success

To make a difference, recovery plans require the support and involvement of local citizens, municipalities, private landowners, and state, tribal and federal agencies to succeed. Many groups throughout the Northwest are working hard to ensure their efforts are coordinated to restore the region's natural resources to sustainable and healthy levels.

When all is said and done, we want our children, and their children, to experience a Northwest with abundant fish runs and a fish-friendly Federal Columbia River Power System. Our economy and our way of life depend upon the river and on healthy salmon populations.

For More Information

For more information on the Federal Caucus, the FCRPS Biological Opinion or Columbia River Basin fish and wildlife recovery, please visit the Federal Caucus web site at www.salmonrecovery.gov. This web site also includes information about the FCRPS BiOp annual implementation plans and progress. You can also find previous issues of *Citizen Update*, and Internet links for related activities and documents. You can call the Federal Caucus toll free at 1-888-921-4886, or email us at federalcaucus@bpa.gov.

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Crims Island in the Columbia River, where comprehensive actions and partnering with others will help restore estuary habitat.